Chemistry Mole Conversions

1. Calculate the number of fluorine atoms in 4.25 moles of fluorine gas.
2. Calculate the number of moles of methane, CH4, in 8.71 x 1022 molecules of methane.
3. Calculate the number of atoms of hydrogen present in the sample of methane in #2.
4. Calculate the number of moles of hydrogen atoms present in the sample in #2.
5. How many moles are present in 288.9 g of iron (II) nitrate?
6. How many moes of magnesium is 3.01 x 1022 atoms of magnesium?
7. How many atoms are in 0.750 mol of zinc?
8. How many fluoride ions are in 1.46 mol of aluminum fluoride?
9. How many moles are in 333 g SnF2?
10. What is the mass of 3.32 mol potassium?
11. What is the volume at SW of 3.20 x 102 mol C02?
12. What is the volume at SW of 5.40 mol oxygen gas?
13. Assuming STP, how many moles are in 5.42 x 10' L Ne?
14. How many molecules are in the neon sample in #13?
15. What is the mass in grams of an atom of nickel (Ni)?